

PACIFIC NUTRITION-CONSULTING

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The National Organic Standard Board
c/o Arthur Neal
Room 4008 – South Building
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Sent via email to: NOSB.Livestock@usda.gov

Public Comment: Regarding NOSB Livestock Committee Recommendation for Guidance
Pasture Requirements for the National Organic Program, March 2, 2005

To the National Organic Standards Board:

I am a private consulting dairy nutritionist, working mostly in California. I have worked with organic dairy farms for over 12 years and work with nearly 2,000 dairy cows under certified-organic production.

The current rule requires access to pasture for ruminant livestock (205.239(a)(2)). However, the rule currently carries no quantitative measures to give certifiers a basis for enforcement of this rule. The recent efforts by the NOSB to give greater substance to this rule are commendable and should be encouraged. There seems to be no question that the consumer supports access to pasture for ruminant livestock as an organic management practice. Any improvements in enforcement should carry the understanding of proper pasture management relating to soil and water quality, impacts on the animal at all the various stages of lactation, and consideration for regional climatic differences.

I support the use of regional Natural Resources Conservation Service (NRCS) Conservation Practice Standards for Prescribed Grazing (Code 528) for proper conservation methods to follow. These are regional documents that need to be customized for individual operations. They offer guidance regarding issues such as residual vegetative dry matter per acre, practices to minimize soil loss and erosion, the maintenance of water quality, and general information regarding crop yield in a season.

However, the NRCS 528 documents do not offer specific information regarding crop yield in specific microclimates in particular soil types under varying levels of pasturing intensity. While this document should be followed by all pasture practitioners, it cannot be used to determine animal density or animals per acre concentrations. Moreover, the authority for enforcement of the provisions of these documents should not be placed in the hands of agencies lacking the proper expertise in conservation management needed to customize these

documents to individual livestock operations with proper consideration of the unique features of soil, topographic and microclimatic makeup of each operation.

I support and encourage the change in emphasis of pasture as the default and preferred management technique for ruminant livestock and that temporary confinement is the exception that needs to be explained in the Organic System Plan. I encourage using the farm plan to force farmers to lay out the pasture management plan for the farm to the certifier.

I support the use of the local or regional "growing season" as the time frame to be enforcing pasture requirements. I would support a definition of "growing season" as "the time of year of grass growth from natural precipitation or manual irrigation practices." While language to define "growing season" in terms of needing to be of a minimum or specified duration usually borders on efforts to unfairly restrict competition in the marketplace and should not be supported, the consumer supports access to pasture. Rules and enforcement measures that limit organic livestock production operations to geographical microclimate areas that offer growing seasons via natural precipitation or manual irrigation under reasonable stocking density can be reasonable.

It seems conceivable that in meeting the consumer's desire for pasture access in areas of the country with extremely short growing seasons, areas without supplemental irrigation, and/or operations with very low or nonexistent access to pasture it may be determined that these areas are inappropriate for certified organic livestock operations and should not be certified. However, great care must be taken to assure that these regulations are instituted to meet the consumer's support of access to pasture and not as trade restrictive measures to keep operations in certain areas of the country or of a certain size operation from entering the marketplace. Consideration also needs to be given for when the use of irrigation unreasonably steps outside the definition and intent of sustainable management practices as required in the rule.

While I support the removal of "stage of lactation" from the list excusing no pasture access, I oppose efforts to place restrictive pasture requirements across all stages of lactation universally. I understand that the change in status of "stage of lactation" is part of the rule change, rather than this guidance statement. However, when looking to apply specific pasture access requirements to all stages of lactation, then these implications must be discussed.

Access to pasture in early lactation, as in all stages, offers great value in terms of exercise, access to the fresh air, the beauty of the scene, and the value to customer relations. However, it has to be accepted that pasture is not an energy dense food and the increase in maintenance energy output required by the animal to harvest pasture is tremendous (NRC, 2001). Especially for dairy cows in early lactation, the nutrient density consumed from pasture is low and the maintenance requirement, or drain on the energy coming in before it can be used for production, is increased and significant. The effects of this on the early lactation cow can be two-fold.

1. The cow may produce less milk in early lactation resulting in a lower level of peak milk production. This could be expected but for two other things going on with the cow:
 - a. In early lactation, the cow's natural hormonal processes are directed to maximize milk production. We see that in the normal lactation curve which peaks at about 8-10 wk of

lactation. Physiologically, the cow will funnel all she can to "support the calf" via milk production at this stage of lactation.

b. Pasture seems to supply unidentified natural factors that further turn the cow's production "faucets" toward milk production. Or

2. The cow can lose body condition. In early lactation, the cow is typically losing body condition after calving. In the system commonly used on dairy cattle for measuring body condition with a score of 1 being emaciated and 5 being obese, a cow typically calves at a body condition between 3.5 and 4.5 points and loses approximately 0.25-0.75 points in early lactation before troughing out and beginning to gain body condition in mid and late lactation. Cows on pasture commonly lose as much as 1 or more points in body condition after calving in good condition and have a harder time regaining body condition in later lactation. The increased loss may or may not be occurring at a more noticeable rate during early lactation but will usually continue for a longer period into the lactation.

The actual observation of early lactation cows on pasture is probably a combination of both a slight loss in milk produced and greater loss in body condition. There are times in some geographical areas during the height of the growing season where this may not be the case but in most climates and latitudes in the US these body condition losses are typical.

The result of this combined loss in peak milk and body condition resulting from intense pasturing of cows in early lactation is less overall milk produced during the entire lactation. This can be expressed in a normal lactation persistency curve as 200 lb less milk over the complete lactation for every lb of milk not produced at the peak of the lactation curve. In cows with lower body condition scores, the drop in persistency is even greater.

An excessive loss in body condition carries reproductive consequences as well as productive losses. Research shows that cows losing more than 0.5 body condition points in early lactation also show a decreased reproductive performance in that lactation. They are less fertile and take longer to become pregnant.

A complicating factor is that many herds are grouped by stage of lactation/production level/or reproductive status. This management technique groups together the cows at higher levels of dry matter intake (DMI)(closer to 4% DMI of body wt than the herd average 3%). A herd of cows averaging 1400 lb body weight would consume 42 lb DMI when consuming an average of 3% of their body weight. The cows in that same herd in early lactation consuming an average of 4% of their body weight would consume 56 lb DMI. (Some individual cows can consume over 60 lb of DM per day) Assuming pasture is 20% DM (discussion to follow), with a 30% DMI pasture inclusion rate, that represents 63 and 84 lb of daily pasture intake needed, respectively. In cases when the actual dry matter content of the pasture can be as low as 10% DM, the pasture intake to meet the proposed regulations would need to be 126 and 168 lb per day in the above examples, extremely high numbers. The result is that when a farmer has made sound management decisions to group his herd into separate strings, this type of requirement becomes punitive to the individual animals that can least afford it.

Specifically to the wording in this guidance document under consideration, I do not support regulations or guidance statements that quantify the intake of grazed feed as being greater than 30% of the dry matter intake for not less than 120 days.

To verify these requirements, a certifier would have to verify the animals total dry matter intake, the dry matter of the pasture forage material consumed by the animal each day and the amount of wet forage material consumed. All three of those numbers are difficult to know with certainty with cows on pasture.

Total dry matter intake: The total dry matter consumption is different for each animal and changes with production level and stage of lactation. Book values and computer models are available but they are nearly impossible to validate for cows on pasture for long periods. Typically, average dry matter intakes are used for a group of cows; however, as the profile of the herd changes over the 120-day period these averages change also. Simply put, a cow's dry matter intake at the beginning of a growing season will not be the same as it is 120 or more days later.

Forage dry matter content: The dry matter content of the forage material consumed each day would need to be known. I have seen pasture analyses range from 8% to 22% dry matter. Most book values for the dry matter content of pasture are between 18-22%. In reality, these values change daily so one constant value should not be used. The dry matter content of a field of grass today is not the same as it will be tomorrow, given changes in wind, precipitation and humidity.

Pasture intake: The actual intake of fresh pasture is impossible to really know in practical farming situations.

Best guesses and assumptions can be used for all the above factors. However, the allowing of varying levels of enforcement by individual certifying agencies of any regulations or guidance statements should not involve unverifiable guesses and assumptions. Moreover, this verification would have to be done for each individual day of the 120-day period. I question that an average consumption of 30% of the total dry matter intake consumed over the total 120 day period would satisfy the way the regulation is written currently.

As it has been stated by some supporters of this initiative, it is fairly easy to back calculate a reasonable estimate of the dry matter intake from pasture after you have been working with a known ration with existing feeds and a known herd or group DMI. I agree, I do this all the time. However, this technique is only valid in a narrow time-frame window. As a group of cows continues through lactation, after peak dry matter intake at approximately 10 weeks of lactation, their normal dry matter intake will decline and without adjustments the amount of intake coming from pasture would appear to be greater than it actually is. Even the 4-month period discussed in this document would see a significant reduction in dry matter intake of a cow in mid or late lactation. The assumed intake of pasture dry matter using this technique could be extremely misleading and incorrect by the end of the growing season.

A further factor needs to be considered when evaluating feed intake of cows on very high levels of pasture. Normally a cow consumes feed until she consumes a desired level of dry matter. When the cow is consuming large amounts of wet grass, the wet bulkiness of the grass can fill the cow's rumen and cause her to stop eating before she has consumed her preferred level of dry matter. At very high levels of pasture intake, pasture has been shown to decrease total DMI of the cow. This fact further complicates efforts to monitor and verify true pasture intake in cows under intense pasture management.

Specifically regarding the use of a 30% dry matter intake requirement coming from pasture for 120 days, I have been unable to determine the origin or basis of this value. I have heard that this value came from survey studies from Cornell University and/or Michigan St. I have been unable to find documentation of these studies and I have been unable to review them. However, it seems the value may have come more from the protocol used in the study rather than from any study results. The imposition of this type of requirement on producers should come through surveys of organic livestock practitioners across the entire US or sound scientific research that covers a wide variety of areas and conditions. It should not come from the survey protocols or even survey results that only looked at pasture management in northern latitude areas of western New York and central Michigan. Both of these regions receive fairly high rates of precipitation with regular summer rainfall with limited variations in soil conditions, topography and microclimates.

A comment must be made regarding the statement from some that this policy would only account for a pasture intake of 10% of the animal's total dry matter intake over the course of a lactation or year. When viewed in that light, it is true, that is a very small amount. If that is the requirement that the NOSB wants to apply then the document should state that. In reality, those are two entirely different statements. One policy would impose a specific management system on all organic livestock producers. The other would allow for a greater amount of flexibility and creativity by individual organic livestock producers for their unique situations.

For years we have heard the talk of the NOP never wanting to really quantifying a pasture requirement, this is exactly what this requirement would be doing. I think most everyone supports elimination of loopholes that allow for, possibly mythical, 1000+ cow dairies with an area the size of a golf green that they call pasture or an area of cropland that the cows never actually see being accepted as adequate amounts of pasture. However, I believe this requirement will be much more limiting than many people imagine when they are actually required to create accurate rations that are monitored over each day of the entire 120-day period.

I disagree with and do not support the 30/120 recommendations. The combined requirement of 30/120 is too regional in scope and difficult to verify for a national government program. It discriminates against herds utilizing sound management techniques of grouping cows by production/lactation/reproductive status. Also, cost of land and the financial liability carried on a ranch or calculated on a per cow basis is highly variable in different regions of the country. It should not be acceptable for farmers for geographical areas of "low cost" to force extreme management practices and less production output on farmers from areas of the country that carry a "higher cost". I am not being critical of pasture dairies when I use the term "extreme". I am using the term in the sense of the spectrum of management practices, with the other "extreme" being total confinement. In this statement, I am putting a value statement on neither.

Finally, I support the exclusion of animal-units from this guidance document by the NOSB. It needs to be noted that animal-units is not the same as cows per acre. The definition of an animal unit is 1,000 lb of animal. An 800 lb cow with a 200 lb calf is one animal-unit. A 1500 lb Holstein cow is one and one-half animal-units. A restriction of three animal-units per acre (or 3,000 lb animal weight) would have been a limit of 2.0 cows per acre for herds with an average body weight of 1,500 lb and 2.75 animals per acre for herds with an average

body weight of 1,100 lb. A herd of Jersey cows could average less than 1,000 lb per cow and thus could carry the three cows per acre in this example.

As I conclude this comment, I am rereading the guidance statement under discussion. I wonder, it being a guidance statement, if this is all much ado about nothing. I support efforts to add emphasis and teeth to the access to pasture section of the rule and I support the wording in the guidance statement of this being a "goal". The wording as it exists in the guidance statement is a fine goal. However, there is the ongoing concern that what is a guidance policy today will become a rule tomorrow. Moreover, uncertainty exists in the field as to how various certifiers will enforce this "goal" into a policy. We must acknowledge that not all certifiers enforce the rules the same. Please remember, the reality in the field is that not all organic producers can choose their certifying agency or can change certifiers when they disagree with their current certifier's enforcement. Many producers are restricted by producer or marketing organizations to one specific certifier who may not reasonably interpret the rules and guidelines in the producer's best interest. Care must be taken even in the wording of a goal in a guidance statement as to its potential enforcement and impact in the real world.

I thank the NOSB for their time and consideration on this matter.

Sincerely,

Daniel Giacomini